

# REPORT ON STEAM TURBINE MACHINERY. No. 96 204

Received at London Office MAY 4 1938

When handed in at Local Office

30th April 1938. Port of NEWCASTLE-ON-TYNE

Survey held at Newcastle-on-Tyne.

Date, First Survey 1st Oct 1937.

Last Survey 29th April 1938

Book. on the Steel Sc "AGIOS GEORGIOS IV"

(Number of Visits 15.)

Tons Gross 4920. Net 2870.

at Sunderland

By whom built Messrs Bartram & Sons Ltd

Yard No. 279.

When built 1938.

ines made at Newcastle-on-Tyne (Hebburn)

By whom made Messrs Whites Marine Eng Co Ltd

Engine No. 146

When made 1938.

ers made at Newcastle-on-Tyne (St Peter's)

By whom made Messrs R & W Hawthorn Leslie & Co Ltd

Boiler No. 1007

When made 1938.

38ft Horse Power at Full Power

Owners George Nicolaou Ltd (Anglo)

Port belonging to Piraeus

Horse Power as per Rule

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

le for which Vessel is intended

Ocean Going.

4 CYLINDER COMPOUND STEAM ENGINE with SR Gearing Combined with LP Turbine with DR Gearing to Propeller Shafting.

of Turbines Ahead ONE COMBINED IN ONE Direct coupled, single reduction geared to ONE propelling shaft. No. of primary pinions to each set of reduction gearing

coupled to Alternating Current Generator phase periods per second rated Kilowatts Volts at revolutions per minute; Direct Current Generator

applying power for driving Propelling Motors, Type Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

BINE DING.	H. P.			I. P.			EXHAUST L. P. TURBINE			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
EXPANSION							2 ROWS PARALLEL THUS:-					
"							1 1/16"	22 1/8"	2			
"							8 ROWS IN TAPER.			3 ROW IMPULSE WHEEL		
"							1 1/16" 6 2 1/8"	22 1/8" 6 2 5/8"	8	MEAN DIA BLADES 22 1/4"		
"							6 ROWS IN TAPER			BLADE HEIGHTS 1 1/4" 6 2"		
"							2 1/8" 6 5 7/16"	25 3/4" 6 30 5/16"	6			
"							ROTOR PARALLEL 20" DIA.					

ft Horse Power at each turbine H.P. - I.P. - L.P. 675

or Shaft diameter at journals H.P. - I.P. - L.P. 4" Pitch Circle Diameter

tance between centres of pinion and wheel faces and the centre of the adjacent bearings

able Pinion shafts, diameter 1st 2nd Pinion Shafts, diameter at bearings External Internal

eel Shafts, diameter at bearings 1st main diameter at wheel shroud, 1st main

ermediate Shafts, diameter as per rule as fitted

be Shaft, diameter as per rule as fitted

onze Liners, thickness in way of bushes as per rule as fitted

eller boss If the liner is in more than one length are the joints made by fusion through the whole thickness of the liner

the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

two liners are fitted, is the shaft lapped or protected between the liners Is approved Oil Gland or other appliance fitted at the after end of the tube

ft If so, state type Length of Bearing in Stern Bush next to and supporting propeller State whether Moveable Total Developed Surface square feet.

opeller, diameter Pitch No. of Blades Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine Can the H.P. or I.P. Turbine exhaust direct to the

ndenser No. of Turbines fitted with astern wheels Feed Pumps No. and size How driven

umps connected to the Main Bilge Line No. and size How driven

allast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size

re two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

umps, No. and size:—In Engine and Boiler Room In Pump Room

Holds, &c. Independent Power Pump Direct Suctions to the Engine Room

ain Water Circulating Pump Direct Bilge Suctions, No. and size

lges, No. and size Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

re the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

re all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks

re they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Overboard Discharges above or below the deep water line

re they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

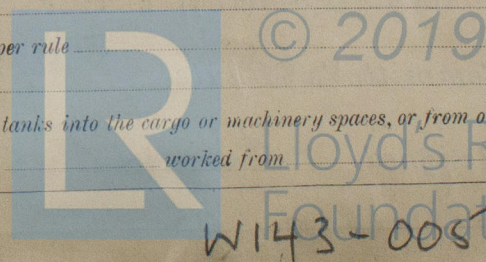
hat pipes pass through the bunkers How are they protected

hat pipes pass through the deep tanks Have they been tested as per rule

re all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one

mpartment to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from



W143-0051



BOILERS, &c.—(Letter for record ) Total Heating Surface of Boilers ✓

Is Forced Draft fitted ✓ No. and Description of Boilers ✓ Working Pressure ✓

Is a Report on Main Boilers now forwarded? ✓

Is { a Donkey } Boiler fitted? ✓ If so, is a report now forwarded? ✓  
{ an Auxiliary }

Is the donkey boiler intended to be used for domestic purposes only ✓

Plans. Are approved plans forwarded herewith for Shafting ✓ Main Boilers ✓ Auxiliary Boilers ✓ Donkey Boilers ✓  
(If not state date of approval)

Superheaters ✓ General Pumping Arrangements ✓ Oil Fuel Burning Arrangements ✓

Has the spare gear required by the Rules been supplied *yes. viz* SPARE GEAR.

State the principal additional spare gear supplied

2 Main Bearing Bushes.

One Complete Carbon Ring for Gland.

One set of Mitchell Thrust Pads.

One set of liners for fore side of Thrust Block.

2 Springs for Carbon Rings.

One Spring for Governor.

One relief valve spring.

2 Shado nuts for bearing Reeps, one stud, one bolt & one fitted bolt (each with nut) for eye handle for

The foregoing is a correct description,

R. & W. HAWTHORN, LESLIE & CO. LIMITED

Manufac

1937  
Dates of Survey while building { During progress of work in shops -- }  
{ During erection on board vessel --- }  
Total No. of visits 15.  
1938  
Oct. 1. 6. 22. 28. 29. Nov. 3. 8. 10. 18. 23. Dec. 6. 17. 22. Apr. 12. 29. DIRECTOR

Dates of Examination of principal parts—Casings 6/10/37. Rotors 22/10/37. Blading 22/10/37 & 18/11/37 Gearing ✓

Wheel shaft ✓ Thrust shaft ✓ Intermediate shafts ✓ Tube shaft ✓ Screw shaft ✓

Propeller ✓ Stern tube ✓ Engine and boiler seatings ✓ Engine holding down bolts ✓

Completion of fitting sea connections ✓ Completion of pumping arrangements ✓ Boilers fired ✓ Engines tried under steam ✓

Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓

Rotor shaft, Material and tensile strength S.M. Steel. 57.2 Kps/mm<sup>2</sup> 30% elong. Identification Mark 2749.

Flexible Pinion Shaft, Material and tensile strength 57.8 Kps/mm<sup>2</sup> 30% elong. Identification Mark ✓

Pinion shaft, Material and tensile strength ✓ Identification Mark ✓

1st Reduction Wheel Shaft, Material and tensile strength ✓ Identification Mark ✓

Wheel shaft, Material ✓ Identification Mark ✓ Thrust shaft, Material ✓ Identification Mark ✓

Intermediate shafts, Material ✓ Identification Marks ✓ Tube shaft, Material ✓ Identification Marks ✓

Screw shaft, Material ✓ Identification Marks ✓ Steam Pipes, Material ✓ Test pressure ✓

Date of test ✓ Is an installation fitted for burning oil fuel *yes.*

Is the flash point of the oil to be used over 150°F. ✓ Have the requirements of the Rules for the use of oil as fuel been complied with ✓

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo ✓ If so, have the requirements of the Rules been complied with ✓

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with ✓

Is this machinery a duplicate of a previous case *yes.* If so, state name of vessel "ST ROSARIO"

General Remarks (State quality of workmanship, opinions as to class, &c.) This LP Turbine has been constructed under Special Survey in accordance with the Rules. The materials and workmanship are good. The turbine has been satisfactorily tested under steam in the shop, set up & fitted to its S/R Gear and was afterwards despatched to Sunderland for installing on board.

The amount of Entry Fee ... £ See  
Special ... £ Receipt  
Donkey Boiler Fee ... £ Report  
Travelling Expenses (if any) £ for fees

When applied for,

19

When received,

19

Committee's Minute

FRI 22 JUL 1938

Assigned

Su Sea 32430

L. Beskett

Engineer Surveyor to Lloyd's Register of Shipping.



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Lloyd's Register  
Foundation